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a coupling-in unit for coupling in onto said waveguide the measuring signals, said waveguide extending in the direction of the product when the apparatus is mounted on the container; and

a receiving/evaluating unit for determining the filling level of the product or the position of the interface in the container via the delay time of the measuring signals reflected at the surface or interface of the product.

C2
17. (New) The apparatus as defined in claim 13, wherein said waveguide comprises a plurality of coaxial layers, the individual wires in the individual layers being twisted in the same direction.

REMARKS

Receipt of the Office Action of June 12, 2002 is gratefully acknowledged

The examiner objects to the drawings under 37 CFR 1.83(a) because the universal joint of claims 23 and 26 are not shown and the opposite direction twist of the wires recited in claims 16, 19 and 20 is also not shown.

In reply thereto, applicants are submitting herewith along with a separate letter to the official draftsman an amended version of Fig. 2 and a proposed new Fig. 5. The proposed amendment to Fig. 2 shows the opposite twist of the wires comprising the two layers. The proposed new Fig. 5 shows the universal or Cardin joint configuration noted in the specification. Upon the examiner's approval, Fig. 2 of the formal drawings will be corrected and new Fig. 5 will be added. For Fig. 5 an appropriate amendment to the specification will also be made.

It is respectfully submitted that the proposed amendments to the drawings do not include any new matter but only matter already disclosed in the application.

Claims 13-31 are pending and these have been examined with the following result:

1) claim 17 is rejected as indefinite under 35 USC 112, second paragraph because the word "siad" in line 1 should be "said." Claim 17 has been amended to make this correction. Claim 17 is now definite; 2) claims 13-20 have been rejected as unpatentable under 35 USC 103(a) over Lütke et al in view of Feese; and claims 21- 31 as unpatentable under 35 USC 103 (a) over Lütke et al in view of Bachmann et al.

These two rejections recited in 2) and 3) are respectfully traversed.

The Lütke et al reference does disclose a liquid level meter with the elements identified by the examiner including a waveguide. The waveguide is, however, "a mechanically rigid rod or a mechanically rigid wire" (column 3, line 66,67 to column 4, line 1). It is not "a wire cable having a plurality of individual wires of a predetermined diameter which are twisted together." The examiner recognizes this fact and introduces Feese, stating that Feese "disclose a method of producing optical waveguides utilizing a method of twisting high tensile strength wires together." The examiner goes on to state that "[t]he motivation to combine Lütke with Feese is in order to obtain another embodiment of the system disclosed in Lütke utilizing a transmission line made from a waveguide produced by the SZ-twisted elements disclosed in Feese." Regarding this analysis, several comments are in order:

(1)

The examiner is assuming that the wires claimed which are twisted together are nothing more than the "SZ-twisted wire" of Feese. Not so. The SZ-twisted wire is wire that is twisted about its own axis. According to the present invention the wire is twisted as shown in Fig. 2, i.e., not about its own axis but about the axis of the cable. Feese teaches nothing of this

type of twisting.

(2)

Even if the teachings of the two references can be combined, the result would not be the present invention but something entirely different. Would such an arrangement have the advantages of the arrangement according to the present invention? It is not possible to tell from a reading of either reference. It is highly unlikely that it would, however, because a SZ-twisted wire is twisted not only about its own axis but because the twisting includes reversal points. One would expect to expect disadvantages not unlike those noted on page 3 of the specification.

(3)

There has not been demonstrated in either reference a basis for combining Lütke et al and Feese. The person of ordinary skill in the relevant art is desirous of having a monitoring apparatus without the high attenuation of the known arrangements. There is no reason to believe that the SZ-twisted wire of Feese will achieve this objective. There must be a basis for the combination, i.e., for supposing that the person of skill in the relevant art would be prompted to look to Feese given the teaching of Lütke et al, *In re Oetiker*, 24 USPQ2d 1443 (Fed. Cir. 1991). Even viewed implicitly, no basis can be found for concluding that the combination of Lütke et al and Feese would result in the invention claimed. The references would have to suggest, implicitly if not explicitly, the wire arrangement shown in Figs. 2 and 3. It is respectfully submitted that they do not.

(4)

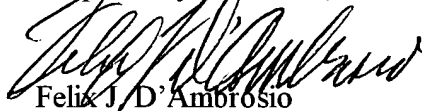
Backmann et al teaches twisting which is in a category like that of Feese. In

addition, it discloses a much more complicated cable, and in fact it discloses a plurality of cables formed into a bundle. Included are "several conductor bundles supported on a central supporting member with braided lead cords arranged in the interstices between the conductor bundles." It is highly doubtful that such an arrangement would function in any way like the cable according to the present invention.

It is applicants' position that the claims as presently formulated are not rendered unpatentable under 35 USC 103 over the combination of references presented by the examiner.

In view of the foregoing, reconsideration of this application is respectfully requested and re-examination undertaken with the result that claims 13-31 are found allowable over the art of record.

Respectfully submitted,



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MARKED-UP COPY OF CLAIMS 13 AND 17

13. (Amended) An apparatus for determining and/or monitoring the filling level of a product or the position of the interface between two media or phases in a container, comprising:

a signal-generating unit which generates high-frequency measuring signals;

a waveguide which comprises a wire cable having a plurality of individual wires of a predetermined diameter which are twisted together;

a coupling-in unit for coupling in onto said waveguide the measuring signals, [and] said waveguide extending in the direction of the product when the apparatus is mounted on the container; and

a receiving/evaluating unit for determining the filling level of the product or the position of the interface in the container via the delay time of the measuring signals reflected at the surface or interface of the product.

17. (New) The apparatus as defined in claim 13, wherein [siad] said waveguide comprises a plurality of coaxial layers, the individual wires in the individual layers being twisted in the same direction.

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Fig. 2

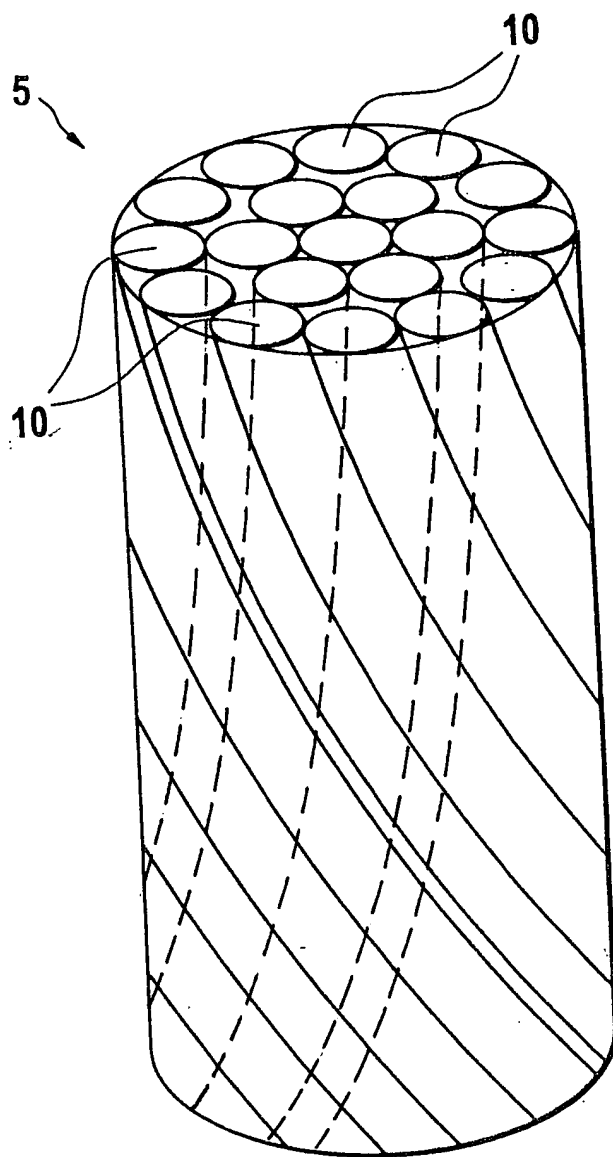
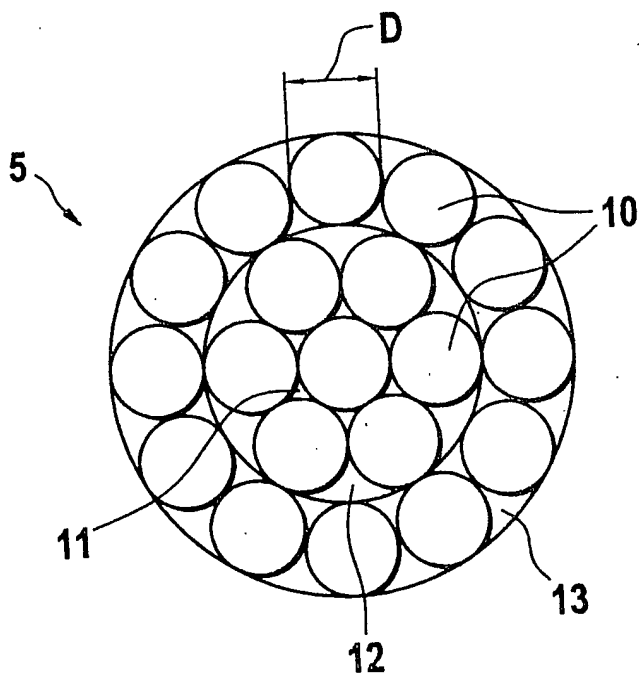


Fig. 3



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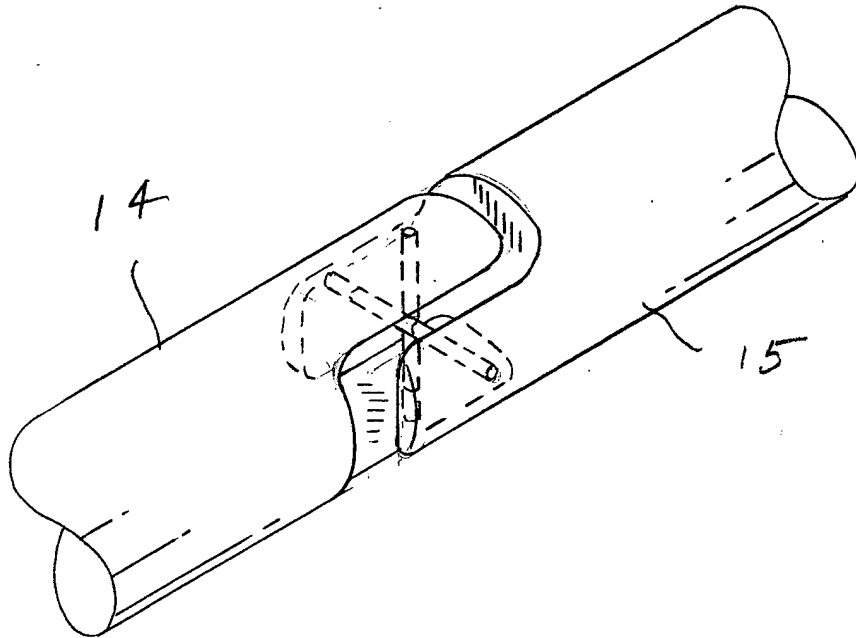


FIG. 5

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